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#EQSJmath

(#TMfSJ)

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Teaching Mathematics for

Social Justice

Conversations with Educators





Our Reading edited by Anita A Wager and David W. Stinson



Part I: an introduction **Part V:** a concluding chapter and there are three distinct parts:

Part II: Historical Development and Theoretical Perspectives of Critical and Social Justice Mathematics

Part III: Teacher Education and Professional Development

Part IV: Teaching Mathematics for Social Justice in the Classroom

Q1:
How do you define social justice and respond to 'mathematics teaching is political'?



Q2:
What norms and/or activities could be used to work on teacher/community beliefs and expectations?

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Q3:
What mathematics content could support students' math sense making AND understanding of social injustices?



Q4:
How might teacher ed programs/districts teach teachers how to teach math for social justice?

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Rachel Lambert

I am a faculty member in the College of Educational Studies at Chapman University in Southern California. My interests are at the intersections of mathematics education, disability studies ...

numberstrings.com

@mathematize4all

Here is our last question of the chat. From our reading it is on pg 188 referencing Robert Moses thinking...

Children don't hate math. What they hate is being confused, intimidated, and embarrassed by math. With understanding comes passion, and with passion comes growth - a treasure is unlocked.

Larry Martinek

InstaQuote

Q5:
What readings/projects could develop student identity and empowerment in math?



Q6:
Respond to "teaching mathematics, more than any other subject, has the potential to influence life chances"

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Guiding Principles

- Doing mathematics is a sense-making activity
- All peoples can and do engage in mathematics
- Students bring valuable knowledge to school
- Mathematics teaching is political
- Continual and critical reflection is necessary to understand context
- Be critical consumers of scholarly knowledge



Guiding Principle 1



Doing mathematics is a
sense-making activity



Guiding Principle 2



All peoples can and do
engage in mathematics



Guiding Principle 3



Students bring valuable
knowledge to school



Guiding Principle 4



Mathematics teaching is
political



Guiding Principle 5



Continual and critical reflection is necessary to understand context



Guiding Principle 6



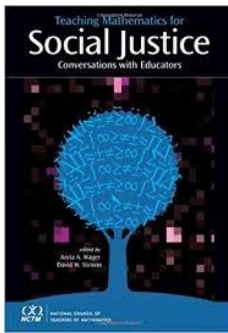
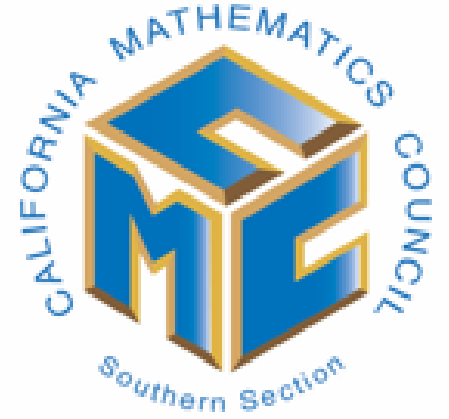
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Guiding Principles

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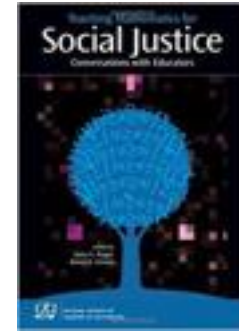
How might you use these guiding principles to reflect on your own understanding of mathematics as a non-neutral subject and broaden students' experiences so that they may begin to use mathematics as a tool to make sense out of and attempt to rectify unjust situations?



Conceptualizing TMfSJ

chapter 8 pg 114 by Tonya Gau Bartell

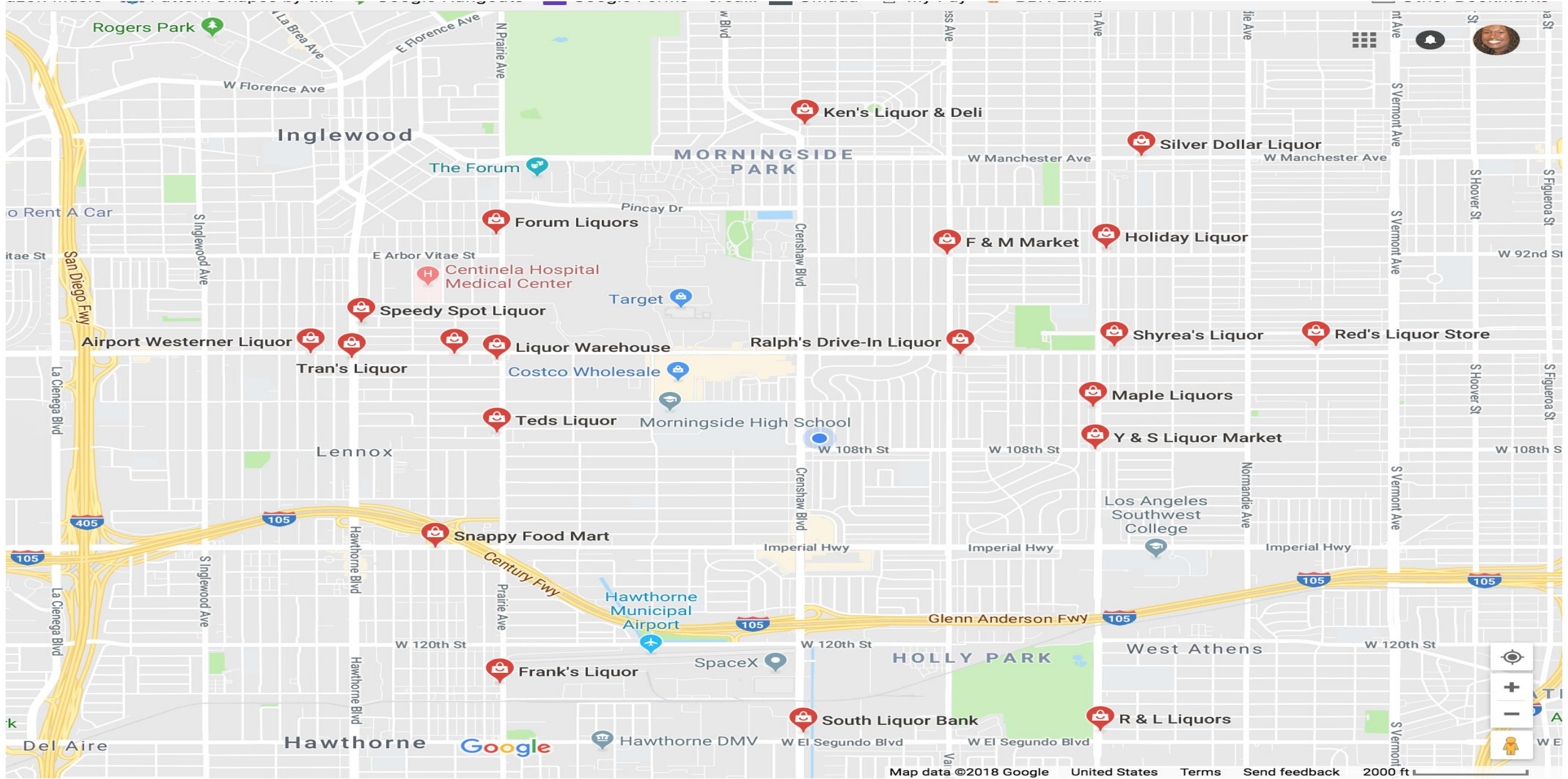
Eric (Rico) Gutstein (Reading and Writing the World with Mathematics: Toward a Pedagogy of Social Justice)



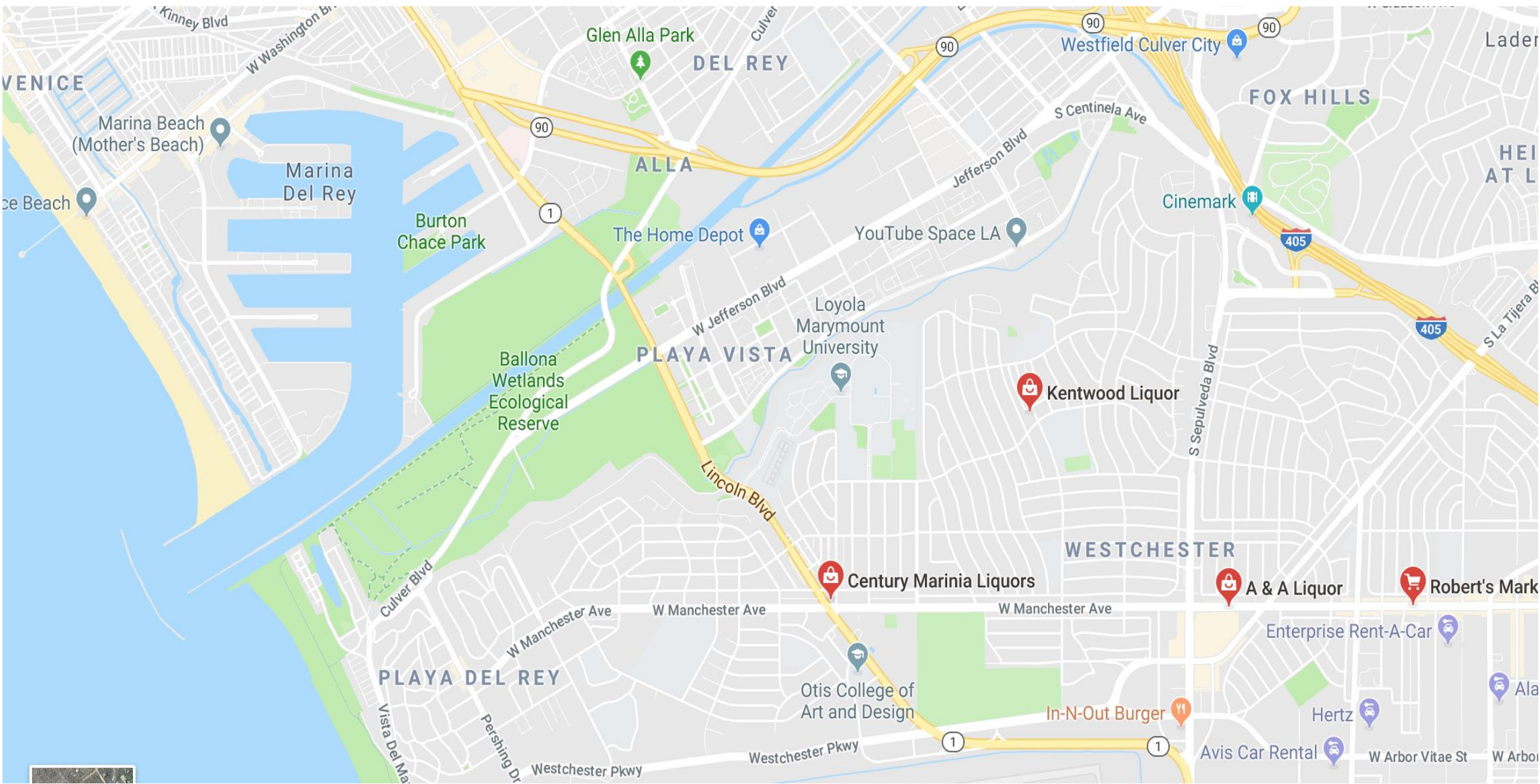
- 1) Mathematics can be effectively used to teach and learn about issues of social injustice, assisting students to develop a critical consciousness that supports them in deepening their knowledge of the sociopolitical contexts of their lives.
- 2) TMfSJ is ultimately used to support action toward equity, using mathematics to not only understand the world but also to change it.
- 3) Through the process of using mathematics to understand and change their world, students strengthen and extend their knowledge and utility of mathematics, seeing mathematics not as separate from their lives but as part of them.



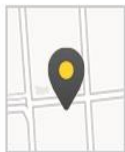
Talk Number 2 Me: How many liquor stores do you see?



Inglewood 9.1 square miles Population 109,673



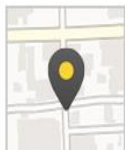
Westchester: 10.81 square miles Population 39,480



31. Banks of Scotland Liquor Store

5014 W Century Blvd,
Inglewood, CA 90304
(310) 674-4833

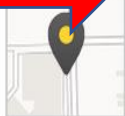
Liquor Stores



32. Wills Liquor

6513 West Blvd, Inglewood, CA 90302
(310) 673-9633

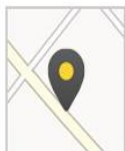
Liquor Stores



33. Ken's Liquor & Deli

8400 S 8th Ave, Inglewood, CA 90305
(323) 751-3147

Delicatessens, Liquor Stores, Restaurants



34. Danny's Liquor

6830 La Tijera Blvd,
Los Angeles, CA 90045
(310) 670-7616

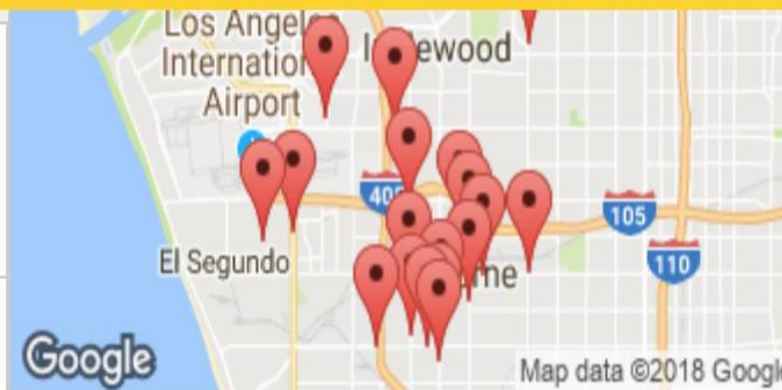
Liquor Stores



35. Penny Pincher Liquor Store

6430 West Blvd, Los Angeles, CA 90043
(323) 751-0035

Liquor Stores



Sponsored

PROGRESSIVE

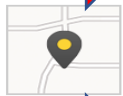
BE A SAVINGS CHAMPION

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\$668

WHEN YOU SWITCH

Get a Quote



1. Andre and A Liquors
6200 W Manchester Ave,
Los Angeles, CA 90045
(310) 410-0333
Liquor Stores



2. Century Marina Liquors
8526 Lincoln Blvd, Los Angeles, CA 90045
(310) 665-0909
Liquor Stores



3. Danny's Liquor
6830 La Tijera Blvd,
Los Angeles, CA 90045
(310) 670-7616
Liquor Stores



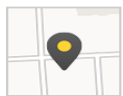
4. Dales Jr
★★★★★ (1)
8105 W Manchester Ave,
Playa Del Rey, CA 90293
(310) 574-6775
Liquor Stores
[Website](#)



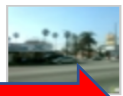
For a local bodega and liquor store this place is quite good! Smoke selection of fresh meats, salamis, hummus, cheeses, produce essentials like oran...



5. Stans Liquor
842 W Manchester Blvd,
Inglewood, CA 90301
(310) 649-6787
Liquor Stores



6. Aria V Wine Shop
11800 Jefferson Blvd,
Culver City, CA 90230
(310) 433-0899
Liquor Stores
[Website](#)



7. Andys Liquor
440 W Manchester Blvd,
Inglewood, CA 90301
(310) 672-1266
Liquor Stores
[Website](#)



8. Purdy Liquor
5919 W 98th St, Los Angeles, CA 90045
Liquor Stores

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(icosapent ethyl)

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160388 09/16

Valley Liquor & Fine Wine

7357 Van Nuys Blvd, Van Nuys, CA 91405
(818) 425-0335



[Website](#) | [YP Ad](#) | [Directions](#) | [More Info](#) Ad



Bob's Market
★★★★★ (1)

1650 Ocean Park Blvd, Santa Monica, CA 90405
(310) 405-6764

e! Delivery To Your Home or Office Available

[Website](#) | [Directions](#) | [More Info](#) Ad

Sendliquor.com

Serving the Westchester area.
Save \$15 on your next Bottle or Basket Delivery! "...

[Website](#) | [Shop Online](#) | [More Info](#) Ad



Inglewood, CA

2010 Census, racial makeup was:

- 55,449 (50.6%) Hispanics or Latinos (of any race)
- 48,165 (43.9%) [African American](#),
- 25,563 (23.3%) [White](#) (2.9% Non-Hispanic White),
- 1,484 (1.5%) [Asian](#),
- 28,860 (26.3%) from [other races](#),
- 4,502 (4.1%) from two or more races.
- 751 (0.7%) [Native American](#),
- 350 (0.3%) [Pacific Islander](#),

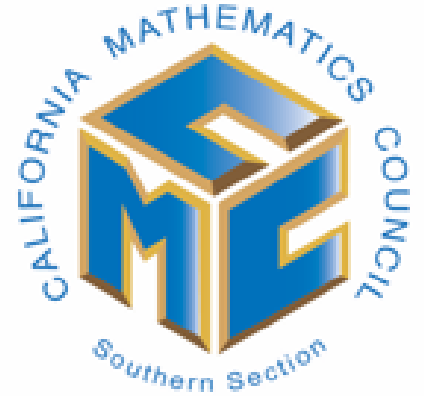
Westchester, CA

2010 Census:

- Those who identified themselves as Hispanic or Latino (of any race) were 18.2%,
- [blacks](#) were at 14.2%,
- [whites](#) made up 61.1% of the population,
- [Asians](#) at 12.0%,
- others (including two or more races) at 11.9%.
- Native Hawaiian and Other Pacific Islander 0.3%,

How do we make a difference?

- What math can you use to change this situation?
 - Given the data, what question should you ask?
 - What is your group's solution?
-
- Use your imagination, logic, and the data to create a transformation.



Culturally Relevant Cognitively Demanding (CRCD) Task Rubric

Description	Degree in Task Structure		
	High	Moderate	Low
Mathematics task explicitly requires students to inquire (at time problematically) about themselves, their communities, and the world about them.			
May draw from connections to other subjects and issues.			
Mathematics task draws from students' community and cultural knowledge.			
Task may explicitly seek to add to this knowledge through mathematical activity.			
Task is mathematically rich and cognitively demanding, embedded in cultural activity.			
Task asks students to engage the discontinuity and divide between school and their own lives – home and school.			
Task is real-world focused, requiring students to make sense of the world through mathematics.			
The explicit goal of the task is to critique society – that is, make empowered decisions about themselves, communities and world.			

From Matthews, L.E., Jones, S.M., & Parker, Y.A. (2013). Advancing a framework for culturally relevant, cognitively demanding mathematics tasks. In J. Leonard & D. Martin (Eds.), *The brilliance of Black children in mathematics: Beyond the numbers and toward a new discourse*. Charlotte, NC: Information Age Publishing.

From: Reflections and Summary of Learning pg 75

by Eric (Rico) Gutstein, co-author of

Rethinking Mathematics, Teaching Social Justice By The Numbers

- Start small and keep expectations measured. It takes much time for teachers and students to develop critical mathematics pedagogies, curricula, classroom communities, and dispositions.
- Develop political relationships with your students, which are integral to critical mathematics. All education is political, whether or not we acknowledge it.
- Confront your biases explicitly. Racism, sexism, and other discriminations are enduring and omnipresent; use mathematics to study them with your students.
- Learn from your students and families what are generative themes of their communities, and then develop and teach curriculum that connects the themes to your requirements.





...Reflections and Summary of Learning pg 75

- Theorize your pedagogical practices and lessons with your students. Keep a journal, collect data, and analyze with others taking the same road, such as other teachers in your school or professional and community networks.
- Develop a “crew” of *coresearchers* and learn with them. Trust them to help you analyze what you and they are learning, and to help you develop and assess curriculum
- Study the sociopolitical context of your students’ communities and the world. Join with social movements for justice and equity, and provide students the opportunities to be involved as well, when and where appropriate.
- Accept that you will not “solve” the inherent tensions in this work—between sociopolitical contexts and mathematics, between providing space for students to develop their voices and being open with your own. Be “patiently impatient” (Freire 1078). As Freire said: “The best way to accomplish those things that are impossible today is to do today whatever is possible”.



Call to Action



Join us in continuing to learn from each other with common readings/tools AND sharing of lessons/units of study that exemplify Teaching Mathematics for Social Justice, TMfSJ.

<https://tinyurl.com/ycdnt8sz>



Thank you and continue the efforts with us!



Thanks to #mathequity colleagues from CMC-Southern Section, @todsmath president, Diana Ceja @imathination and @BBA_west director, Christina Lincoln-Moore @virtuouscm



Thank you ALL for joining us in the call to collective awareness and action, @CAMathCouncil South President, Rosa Serratore @serratore4

And a very special thanks to @nctm @robertqberry @mlarson_math and @MathEdLeaders (ncsm) @jstaley06 @cfryschrock for providing us this collaborative forum 2016-2018...

